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REPORT ON ORTHOPEDIC SURGERY,

MADE AT THE ANNUAL MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY, CONVENED IN CHICAGO, MAY 3d, 1864.

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NOTE.—The Verbal Analysis of the report made to the Society covered portions of the whole ground of Orthopedic Surgery. By resolution of the Society all reports were required to be furnished for publication by the 1st of July. It is impracticable with other engagements to complete the whole Report in a satisfactory manner, by that date. The portion embracing the group of deformities of the feet, known by the generic term TALIPES, is all that can appear in the Transactions for this year.

It is believed that the presentation to the profession of the latest advances in this country and in Europe, with the improvements introduced by the writer, will enable every practitioner to cure every uncomplicated case of Congenital Talipes occurring in his own practice, if undertaken during the early months of infancy.

It is also believed that most cases under fifteen years of age are capable of successful treatment, by patience, perseverance and skill.

DEFINITION AND CLASSIFICATION OF THE GENUS, SPECIES, AND VARIETIES OF TALIPES.

The term Talipes (Latin, *talus*, an ankle, and *pes*, a foot,) has come to be adopted as a generic term for what is known as club foot, reel foot, and splay foot or flat foot. The name expresses only a minor element of the deformity—the ankle in some species being not at all displaced or deformed—but this is of no great importance, since the technical signification has been agreed upon.

Definition.—A malposition or malformation of the foot, congenital or acquired, in which, from some deviation at the ankle joint, or in a greater or less number of tarsal or tarso-metatarsal joint, the sole of the foot fails to apply to the ground in the natural position.

Of this genus there are six species: Talipes equinus, calcaneus, varus, dorsalis, plantaris, valgus.

Of these species there are six possible secondary combinations or varieties: Talipes equino varus, equino dorsalis, equino valgus, calcaneo varus, calcaneo valgus, calcaneo plantaris.

The conception of the tertiary combinations, when once familiar, will also be simplified by classifying them thus:

Talipes equino varo dorsalis, equino valgo plantaris, calcaneo varo dorsalis, calcaneo valgo plantaris.

Talipes equinus, is the term applied to that position which, by long continued voluntary elevation of the heel to compensate for several inches shortening of the limb, becomes, not only habitual, but fixed, by the permanent shortening of the triceps extensor pedis, and the adaptation of the ligaments to the habitual relations of the bones of the leg and tarsus. The habitual voluntary contraction of the triceps muscle (gastrocnemius, plantaris longus and soleus,) terminating in the tendon Achilles, becomes permanent and involuntary; after which the muscular tissue changes its character, is absorbed,

or in part replaced by fat, while the white fibrous tissues investments become hypertrophied, converting the muscles into ligaments both in constitution and function. The result is a compensating deformity, and to attain the best possible compensation bringing the phalanges as nearly as possible within the vertical line of pressure, the foot comes to be more than naturally arched by the contraction of the *tibialis posticus*, the *peroneus longus*, the *flexor longus digitorum*, upon the back of the leg, and the *adductor pollicis*, the *flexor brevis digitorum*, the *abductor minimi digiti*, and the muscular accessories, with corresponding shortening of the plantar fascia under the foot. The action of the long and short flexors of the toes would curl them under the sole, as the fingers are flexed upon the palm, if they were not kept out by the weight of the body upon the phalanges.

This makes the variety *T. equino dorsalis*, which in the confirmed state is more common than either species unmixed. The deformity which has been described as originating in a voluntary attempt at compensation, may result from spasmodic contraction of one set of muscles, or paralysis of their antagonists.

Talipes calcaneus.—A deformity in which the heel comes to the ground and the anterior portion of the foot is drawn up by the disproportionate contraction of the *tibialis anticus*, *peroneus tertius*, and *extensor longus digitorum*. This is a deformity so rare as only to be admitted as a possibility.

Talipes calcaneo plantaris, is a combination, equally rare, in which the yielding is not chiefly in the triceps *extensor pedis*, but in the medio tarsal articulation, between the astragalus and the calcaneum behind, and the scaphoid and cuboid before, with yielding to a smaller extent, of the more anterior joints of the tarsus.

Talipes varus.—This is the most common of all the species, whether congenital or acquired, and consists in the inversion and rotation of the anterior half of the tarsus, which can to a slight degree be imitated by taking hold of the phalanges and

metatarsus, and bending the foot in the direction in which the tibialis anticus would draw it. In making this twist, the calcaneum and astragalus will become adducted, as in the position which a child will sometimes assume in standing upon the outer edge of his foot.

Attention has been called to a better anatomy of this deformity by Mr. Barwell, in his little book, entitled "Club Foot without Division of Tendons," in which he gives the appropriate name "medio tarsal articulation" to the articulation between the calcaneum and the cuboid on the outside, and between the astragalus and the scaphoid upon the inside. "This is the centre of the twist, which in a delicate foot can almost be imitated, inward. While outward, or in even the opposite direction, there is very little capability of a twist to bring down the inner side of the sole."

In this species there is no important contraction of the triceps, through the tendon Achilles, or in other words, a corresponding elevation of the heel. The heel is tilted over as if the hand were adducting the whole foot, by taking hold of it and pulling it inward. The inner or tibial edge of the foot is turned up, and the outer or fibular side turned down, and in the worst cases, carried in toward the opposite foot, so that the outer side of the dorsum of the foot comes to the ground. The sliding of the scaphoid outward upon the astragalus makes the former bone very prominent, receiving, with the cuboid and the anterior portion of the outer and lower edge of the calcaneum, the weight of the body in standing and walking. The cuticle becomes unnaturally thickened, and between the integument and the bone, bursæ develop themselves as cushions to protect the bones from pressure in walking.

There is at first no transverse narrowing of the metatarsus and phalanges, but the pressure of walking gradually approximates the two borders of the metatarsus and phalanges; the fissure or concavity being in the plantar surface. The deformity appears to result from disproportionate contraction of the tibialis anticus, while the flexors and extensors are balanced,

and the peronei muscles paralyzed. The tibialis posticus assists in the inversion of the foot so as to make the toes point toward the opposite foot.

Fig. 1. A Front View.



This mal-position is very well illustrated by the following cuts representing the lower extremities of a gentleman 52 years of age, whose parents took him to Cincinnati when an infant, to consult the best surgeons of that city. The parents were told that nothing could be done for the child.

Fig. 2. A Back View.

It will be noticed that, in these figures, there is very little elevation of the heel through shortening of the tendon Achilles, the mal-position consisting of a remarkable twisting and doubling of the feet.



Talipes equino varus.—This combination is the most common variety of *Talipes* acquired subsequently to birth, and consists of disproportionate contraction of the triceps extensor

pedis, through the tendon Achilles, elevating the heel, and making a Talipes equinus. The tibialis posticus tends to double the foot inward, while the tibialis anticus at the same time acts upon the inner edge of the foot, and rotates it, while the tibialis posticus, flexor longus digitorum, and the short flexors originating from the calcaneum, shorten the arch of the foot, making the compound expressed by the succession of terms, Talipes equino-varo-dorsalis. Walking doubles the foot still more, antero posteriorly as well as transversely, almost completely turning it upside down, giving the gait a much worse hobble than that of simple varus, and presenting a complicated deformity requiring apparatus equal to the versatility of the hand for its successful treatment.

Talipes dorsalis.—An unnatural elevation of the arch of the foot by a change in the medio-tarsal articulation, or the tarso-metatarsal articulation, or in all combined. This condition has already been noticed in combination, in T. equino dorsalis, and T. equino varo dorsalis. It may exist as an uncombined deformity, either as a natural development, as the result of disease or injury, or as an artificial production. The shape of the foot produced by the Chinese shoe is a shortening of its length and a humping up of the instep, making a stumped appearance—a Talipes dorsalis.

It may also result from a partial dislocation, breaking up of the ligamentous fastenings on the dorsum of the foot, and permitting a shortening of the base of the tarso-metatarsal arch. This once occurred under the observation of the writer. A young man falling twenty feet, from a tree, and dislocating the tarso-metatarsal articulations of both feet. The deformity was never completely reduced, and the tarso-metatarsal joints remained permanently elevated, requiring shoes to be made according to special measurements.

Talipes plantaris—flat-foot.—The condition in which the sole comes to the ground in all parts; there being little or no arch. This is the natural condition in a portion of the negro race, and is often the result of want of action of the tibialis

anticus and T. posticus, resulting in elongation of the plantar fascia from too great tension of it. In feeble children it comes from premature walking.

Talipes valgus.—The condition in which the anterior half of the foot is carried outward in the direction opposite to that of T. varus.

The tibialis anticus and tibialis posticus fail, and the peroneus longus and peroneus brevis passing behind the external malleolus, pull upon the outer side of the foot and evert it. At the same time the peroneus tertius passing down in front of the external malleolus, elevates the outer side of the foot and tilts the astragalus and calcaneum outward in the opposite direction to that taken in T. varus.

Fig. 3. Seen from behind and on the inner side.

The following cut illustrates this species, which is rarely met with, without complication. The figure is taken from the cast of the foot of a gentleman living in Boston. The cast is kept by Messrs. Tiemann & Co., Surgical Instrument Makers, N. Y., for the purpose of making upon it, the apparatus which aids him in walking.

It will be noticed that this is a simple *Talipes valgus* without any flattening of the arch of the foot to make the species *plantaris*. The more common development is,



Talipes valgo plantaris.—The condition in which the anterior half of the foot is carried outward and upward, bringing the inner side of the tarsus to the ground, while the arch of the foot is lost by the relaxation of the muscles, ligaments, and fasciæ which sustain it. As the deformity progresses, the extension or downward projection of the medio-tarsal joint, permits the metatarsis to rise altogether from the ground by the action of the peroneus tertius, leaving the weight to come

altogether upon the tarsus. This extreme perversion, however, constituting a *Talipes calcaneo-valgo-plantaris*, is rarely attained. When existing, it must arise from the action of the extensor longus digitorum acting in concert with the peronei muscles, or more commonly, from paralysis of the opposing flexor and adductor muscles.

Talipes calcaneo varus is only a possible variety, resulting from disproportionate action of the tibialis anticus and tibialis posticus, the triceps extensor pedis being paralyzed, so as to prevent the long flexors to elevate the metatarsus, while the heel remains depressed.

This classification may seem unnecessary, but it is the shortest way of describing the great variety of deformities classed under the generic term *Talipes*. Having once become familiar with the terms, they will ever afterwards convey definite ideas, not only of the forms, but of the muscular contractions which must be concerned in producing and perpetuating them.

A clear idea of these conditions will lead to a rational interpretation of the indications of treatment, whether preventive or curative.

Similar deviations from the normal form of the hand should receive a similar classification, only that their rareness makes it unnecessary. Their pathology is undoubtedly the same, whether con- or post-genital, depending upon paralysis of one class of muscles, or over-action of their antagonists, or both combined, or more rarely, some accidental injury, resulting in partial dislocation, ending in permanent deformity, or from the contraction of the cicatrices of burns or ulcers.

COMPLICATIONS.

1. The complications may be congenital or acquired absence or diminution of one or more bones, implying the impossibility of complete restoration of the form and functions of the foot, though great improvement may in some cases be effected by treatment.

2. Ankylosis of one or more joints from fractures or wounds nearly or quite helpless of benefit from subsequent treatment.

3. Anchylosis from arthritic or periosteal inflammation, in which the treatment is chiefly preventive by substituting before it is too late passive motion for absolute rest of the parts in relation to each other.

4. Contraction of cutaneous cicatrices from burns, ulcers or wounds. The treatment should be preventive; for confirmed deformities from these sources are extremely difficult to overcome.

5. Rheumatism, producing talipes, or simply attacking a talliped, requiring the abatement of the rheumatism in addition to whatever else may be done.

6. Corns and bunions requiring nice adaptation of shoes where, from the age of the patient, they cannot be cured by restoring the foot to its proper form.

7. Absence or deficiency of toes.

8. Supernumerary toes which may be cut off.

9. Deviation of the forms and directions of the toes from fractures, wounds, arthritic or periosteal inflammation, the contractions of cicatrices from burns or other injuries, from faulty shoes, from pressure of the weight of the body, or from paralysis of muscles. These deviations are sometimes incapable of remedy except by amputation of offending toes.

CAUSES AND NATURE OF TALIPES AND ALLIED DEFORMITIES.

The nice adjustment of forces by which typical symmetry is produced and maintained in all organized growth, only needs to be contemplated to secure admiration.

The exceptional deformities, proving the possibility of imperfect adjustment of these forces, or of the occurrence of accidental impediments to their exercise, only excites our attention all the more, to the nice balance observed in the ordinary working of the law of development.

In individual failures of this organic law of symmetry, the question will arise as to the modes of deviation:

1. Whether from excessive nutrition, analogous to that which secures the disproportionate growth in parts which are brought to perform compensating functions, as a leg or a kid-

ney, which, from the impairment or destruction of the opposite, is invited to perform more than its natural part.

2. From deficient nutrition direct, from the obstruction of the blood-vessels which supply it, or indirect from failure of nervous supply to the capillaries of a part, failing to open them to the supply of blood, or from accidental or artificial quietude, and ogus to that of muscles closely confined in splints and bandages while a fractured bone is uniting.

3. From accidental positions, widely varying from those which are usual and which act to produce deformities like the forces which are afterwards employed to remove them. By this means some tendons may be forced to grow too long and others permitted to become too much shortened; while the bones, which become inordinately compressed, take the shapes which the altered forces tend to give them.

4. From some observations made by Cruveilhier, this careful pathological anatomist came to the conclusion that position of the foot within the uterus was often a cause of Talipes.

As a moderate Talipes varus is the ordinary position of the foot within the uterus, this deformity can hardly be explained upon this hypothesis, but a Talipes valgus might possibly be produced by an eversion of the foot from the pull of the umbilical cord accidentally entangled around it.

Twisting and displacements and spontaneous dislocations of the knee joint, of the hip joint and of the shoulder joint can sometimes be most plausibly explained upon this supposition.

5. From the occurrence of causes which directly compress, or partially or completely cut off portions of the developing limbs. Portions of the liquor amnii unusually condensed or solidified into sheets or shreds, may produce deep fissures in parts upon which they press, or they may completely amputate the included parts. The peculiar deformities constituting the genus Talipes can hardly be explained by reference to this class of causes. Spontaneous amputations doubtless often owe their occurrence to this cause.

6. From disease directly resulting in the death of the parts affected. The writer has in his possession an aborted fœtus of four months, which exhibits gangrene of one upper extremity, including the shoulder. If this fœtus had lived, there would have been the birth of a one-armed child. Spontaneous amputations are sometimes produced by this cause, but Talipes cannot be thus explained.

7. From the union of parts of two or more individuals resulting in redundancy of number. This is the explanation of a great variety of monstrosities, but it does not apply to Talipes.

8. From an influence existing in the germinal origin of the individual, like that which determines the color of the skin, the family likeness of features and the temperament. It is thus that in same families there is a perpetuation through several generations of five fingers upon the hand and six toes upon the foot, the deficiency of a thumb or a redundant one.

Though several cases of Talipes sometimes occur in one family, and in rare cases it may be repeated in the next generation, the cases are too few to favor this explanation of its occurrence. Causes acting upon the innervation of the fœtus subsequent to the formation of the type of the individual constitute a more probable explanation.

9. From causes set in operation through physical and mental influences of the mother. As an example of physical influence: One of the common expedients for distinguishing pregnancy from enlargements within the abdomen from other causes, is to place the hand, previously reduced in temperature, upon the mother's abdomen, to excite a convulsive movement in the fœtus. This movement may be stimulated by the compression made by the sudden tension of the abdominal muscles induced by the cold application. On the other hand, great physical exertion and the occurrence of grave disease affecting the constitution of the circulating fluids, are followed by diminution or cessation of fœtal movements, as if from some diminution of the fitness of the blood to afford to the

fœtus the highest activity of nutrition. The death of the fœtus and its expulsion is a frequent occurrence under these circumstances.

That deformities should sometimes arise from this impaired or perverted nutrition is as probable as that similar disturbances should, after birth, produce local congestions and inflammations, or convulsions and paralysis; some constitutional tendency previously induced determining the location and character of the diseased action.

Protracted mental depression, the indulgence of ungoverned anger, hate or revenge, impairing digestion, are supposed to be unfavorable to the best development of the fœtus, while the cheerful and joyous emotions are invited as most favorable.

With the shock from the sight of a repulsive object the mother feels a convulsive movement of the fœtus, followed by a diminution of habitual movements, and her attention is afterward anxiously fixed upon her own sensations and those produced in her by the fœtus. Derangement of the digestion of the mother, and the consequent impairment of the healthy and nutritive qualities of her blood, which is the source of nutriment to the fœtus, often exist for a longer or shorter period, and deformities sometimes follow; but at the birth the mother's fears are generally found to be needless, as a perfect form occupies the place of the dreaded deformity.

In the few cases that do occur there are, in exceptional instances, striking resemblances to some object seen by the mother during pregnancy; but, upon close scrutiny of the deformities, they are found to belong to classes of excessive, deficient, perverted or arrested development already referred to, from the various causes classified, and their resemblances are too few, in comparison with the whole number, to be worthy of any other explanation than that of coincidence. We all know how a striking coincidence takes more hold upon the mind than many discrepancies. The adoption, early in the civilization of all nations, of the theory of the direct

production of special deformities, through the images impressed upon the mind of the mother, is probably thus best explained.

The deformities arising from spasm and paralysis are more frequent in the lower extremities from the more feeble, more easily deranged and less easily restored innervation of these parts. They are therefore more often seen in the streets, and from the awkward movements in walking they are more repulsive than deformities of the upper extremities which need not be made conspicuous in public places.

The late development and comparatively low innervation of the inferior half of the fœtus might be expected to result in the existence at birth of a greater number of deformities, produced by nervous derangements, in the inferior than in the superior half of the body. From this physiological order of development, as well as upon the hypothesis of coincidence, therefore, a mother who is shocked at the sight of a lame leg is more likely to have a child affected with Talipes than with a corresponding deformity of the hand, the deteriorating influence of the nervous impression upon the blood being more likely to result in spasmodic or paraletic afflictions of the lower than of the upper extremities of the fœtus.

(To be continued.)

CLINICAL LECTURES ON DISEASES OF THE EYE.

By E. L. HOLMES, M. D., of Chicago,

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THE IRIS.—ANATOMY AND PHYSIOLOGY.

GENTLEMEN :—We have, thus far in our course, finished a brief examination of the conjunctiva, cornea, and their diseases. I need scarcely repeat that these diseases are the most

important for you to understand, since they are the most common, and, if neglected, perhaps the most destructive to vision.

In the limited time to which we have been confined, I have necessarily been unable to present to your consideration more than the outlines of the subject—to teach you how to study these diseases by showing you as many cases as possible, and by referring you to the most reliable authorities.

We now come to an entirely different series of structures, the Iris, Crystalline Lens, and Ciliary Processes—the study of their anatomy, physiology, and their diseases, which are of uncommon interest. As heretofore, I shall necessarily be brief and present you but the outlines of the subject I think you will not fail to follow with interest.

The Iris is a thin, circular membrane, composed of areola tissue, containing muscular fibres, vessels and nerves. This areola tissue is filled with a number of star and spindle shaped cells, with minute appendages, anastomosing with each other, as described in the lecture upon the conjunctiva. These cells are, to a greater or less extent, supplied with pigment.

The muscular fibres are non-striated and are arranged in two distinct groups; the circular running parallel with the pupil in concentric rings; and the straight, radiating fibres, which are arranged between the circumference of the iris and the pupil, like the spokes of a wheel. The contraction of the former muscles diminishes the size of the pupil, that of the latter increases it.

Although numerous pigment cells are found throughout the whole substance of the iris, they are especially abundant in its posterior layers. The amount of pigment in this layer is perhaps more uniform in different individuals than in the other layers. In individuals with light-colored irides this pigment shows through the other layers which are comparatively free from pigment, giving a blue or gray color to the eyes. Infants usually have but little pigment in the anterior layers of the iris, hence their eyes are generally blue or gray. As they become older, more pigment is deposited. The different shades

of color in the iris of the adult depends upon the amount of pigment in the anterior layers of the iris. Occasionally pigment is so unequally distributed in the iris that small dark spots are observed upon its surface.

The posterior surface of the iris is covered with minute radiating lines, continued from the ciliary processes. The whole iris is covered with a delicate epithelial layer.

The diameter of the iris is more than a line longer than that of the cornea. This is an important point in connection with the operation for artificial pupil. An instrument introduced through the sclerotic three-fourths of a line behind its union with the cornea, if held parallel with the plane of the iris, will enter the anterior chamber without injuring the iris.

The iris is attached at its periphery to the cornea and ciliary processes. This attachment is quite delicate, and seems to vary in strength in different individuals, if we may judge from the readiness with which it is broken by slight blows upon the eye. The iris is hung like a curtain in the space between the lens and the cornea, dividing it into two chambers, the anterior and posterior. The papillary edge of the iris is in contact with the anterior surface of the capsule of the lens. The posterior chamber is therefore very much smaller than the anterior, being in fact but a very narrow space near the periphery of the iris.

The iris is supplied with nerves of sensation from the fifth pair; the motor nerves of the circular muscles are derived from the third pair, and the motor nerves of the radiating fibres are derived from the sympathetic. These nerves, after passing from the ciliary ganglion, situated just behind the eye at the outside of the optic nerve, divide into twelve or more filaments, which enter the sclerotic and pass forward in the choroid to the ciliary muscle and iris.

The vessels of the iris are the ciliary arteries and veins—branches of the ophthalmic artery and vein.

The functions of the iris are three-fold: to regulate the amount of light which enters the eye; to secrete the aqueous

humor; and to assist indirectly in adjusting the eye for vision at different distances.

Normal changes in the size of the pupil are produced by variations in the amount of light, which falls upon the retina. A ray of light shining upon a portion of the iris above, without passing through the pupil, will not cause it to contract. But if the ray enters the pupil, the contraction occurs at once.

Although the iris is believed by most physiologists to be the organ which secretes the aqueous humor, it is evidently not the sole source of this fluid, since it is still found in the anterior chamber, when the iris has been removed from the eye by accident. It is so richly supplied with blood and secretes the aqueous humor with such rapidity, that when wholly evacuated through an incision in the cornea the anterior chamber is refilled in a couple of minutes.

When we come to speak of the power of adjustment of the eye for vision at different distances, your attention will be called to the part performed by the iris in this act.

There are several interesting and important points regarding the pupil which you should remember, not only as students of diseases of the eye, but as students of general Medicine. In examining an eye with a dilated pupil, you should bear in mind that the patient may have used, with or without design, Belladonna in some form. With the pupil contracted there might be reason to inquire whether Calabar Bean had been employed.

In examining an eye in reference to the movability of the pupil, the other eye should be kept covered, while the former should be alternately covered and uncovered with the hand. The following fact will explain the reason why this should be done: If both eyes are exposed to light, on covering only one of them the pupil will dilate but half as much as it would if the other was covered also. The manner I have just described will enable you to obtain the greatest possible change in the size of the pupil.

The pupil is much contracted during sleep. The iris re-

sembles the other sphincters of the body in being thus firmly contracted during sleep.

The condition of the pupil is an important symptom in several pathological changes in the nervous system. A constantly dilated pupil is often a symptom of disease of the optic nerve, so often called amaurosis. Sometimes, however, when a patient cannot distinguish day from night, the pupils will dilate and contract upon alternately exposing the eyes to light and shade.

Contraction of the pupil often occurs when the ocular branches of the fifth pair of nerves are irritated, as for instance by the presence of a mote upon the cornea or under the lid.

Whatever produces directly or indirectly either irritation of the nerves supplying the circular fibers of the iris, or paralysis of those supplying the radiating fibers, will cause contraction of the pupil. But either paralysis of the circular or irritation of the radiating muscles will produce dilatation of the pupil. Certain fractures of the skull, compression of the brain, tumors, and effusions of blood or serum in the brain, by paralyzing the nerves of the circular fibers often produce dilatations of the pupil. Irritation of the bowels, onanism, seem to produce the same condition of the iris by irritation of the nerves of the radiating muscles.

Belladonna appears not only to paralyze the circular muscles, but also to excite the radiating fibers to contract, thus producing dilatation of the pupils. When taken internally this drug passes by the circulation to the nervous centres. When applied locally it acts directly upon the iris itself, being absorbed by the tissues and conveyed directly to the iris.

It is perhaps worthy of notice that the pupils are contracted when the axis of the eyes are convergent, as in looking at near objects. On the other hand, they are dilated when the axes are divergent, as in looking at distant objects.

In near-sighted individuals the pupils are usually dilated and situated quite far behind the cornea. On account of this

great depth of the anterior chamber the cornea appears more convex than it really is.

In far-sightedness the pupil is usually much contracted and placed forward with the lines quite near the cornea; the anterior chamber is consequently of comparatively little depth.

These subjects will be more fully discussed in a subsequent lecture.

SELECTED.

ON CERTAIN ABUSES OF CAUSTICS.

By Dr. JAMES MORTON,

Lecturer on Materia Medica, Anderson's University, and Surgeon to the Glasgow Royal Infirmary.

I common inflammation of the fauces, popularly known as sore-throat, and usually ascribed to cold as a cause, and whose symptoms I do not take time to enumerate, presuming that no one can mistake it, surely the employment of caustics can not be said to be requisite. But besides being unnecessary, there is the additional objection that it is the means of inflicting a very considerable amount of pain. The disease will speedily disappear, if left to itself, or treated by soothing agents. Should suppuration take place, the possibility of the caustic application producing an earlier evacuation of the pus must be admitted. This, however, must be regarded as an accidental circumstance, as the caustic is not employed with this intention.

Very much the same may be said in respect to ulcerated sore-throat, except that in addition some mild alterative may be required, and a caustic application can only rarely, if ever, be necessary to repress prurient granulations, as in other parts of the body.

In regard to the three eruptive diseases, measles, scarlet fever, and small-pox, in all of which the throat is so apt to become affected, it is difficult to speak so as to avoid misconception. When a slough forms upon the fauces, the part is

often diligently assailed by the over-zealous practitioner, in the hope of thereby arresting the sloughing process; and when it ceases to extend, he is thought to have succeeded, and he plumes himself and is praised by others accordingly. I have no hesitation in affirming that this gratulation is often misplaced, and that the slough would have been smaller, and would more speedily have disappeared, had no caustic application been resorted to. This is not unfrequently exemplified in the treatment of scarlet fever, in which the mucous surface of the throat often suffers severely. Almost every one who has seen much practice must have witnessed cases of this severe throat complication occurring in children, not infants, who have obstinately and perseveringly, and with success, resisted all attempt to cauterize their throats, or even to touch them. In very many instances these do as well as, or better than those who may have been subjected to the ordeal; and the former are often as severe in the character of the attack as the latter. The more rarely, therefore, that we employ caustics in such cases, the better for our patients, and the more pleasant will be our treatment. All the local applications may be of a soothing nature, and it is not our present duty to discuss the constitutional treatment. (It may be proper to remark also, that the erosive treatment of small-pox by nitrate of silver, is a topic foreign to the object of this paper.) Some have an idea that active treatment of the local complication has a powerful influence over the constitutional affection; or, in other words, that the speedy removal by caustic applications of the morbid exudations from the situations upon which the disease seems to fasten in its greatest intensity, is of the very greatest effect in counteracting the deleterious action of the morbid poison upon the general system. This notion (it is scarcely entitled to be called an opinion) will not be maintained by many, and is such an untenable position that it does not seem to be necessary to attack it. An opposite mode of reasoning is taken by the majority, viz., that the severity of the systematic poisoning has much to do with the intensity of the local manifestations of it.

After what has now been said with more especial reference to scarlatina, it is not requisite to say much respecting measles and small-pox. Affections of the throat are not so common in these two varieties of the exanthemata, and the objections already urged may apply to rubeolous and variolous cases in which the throat is found to suffer.

In the disease now styled diphtheria the use of caustics, as

they are too often employed, is, in my opinion, productive of the most disastrous consequences. All the symptoms of this malady indicate the presence of a general toxic agent, probably an epidemic poison, and the prominent symptoms are those of debility, the throat affection coming on insidiously, often unperceived for a time, often with little or no pain, and a slight degree of swelling, though in some cases the tumefaction in and around the throat is very considerable. The chief indication is to support the strength; another important though subsidiary one ought to be, to avoid measures calculated to add to the existing local complications. It is a custom with some, I hope not with many, to divest the fauces of the whitish leathery covering which forms upon them, literally to dissect it off, and then to apply the solid nitrate of silver or some liquid caustic freely; and not only so, but to repeat this process daily, or as often as the adventitious membrane reforms, and in the belief that they are only doing what is absolutely necessary towards giving their patient the best chance of recovery. This line of practice I regard as a woeful mistake. It seems to me that, by so acting, the surgeon is diligently endeavoring to undo all that nature is attempting to effect toward a spontaneous cure of the malady. Surely no one imagines, that by tearing the exudation off the fauces, he will prevent its extension into the larynx and trachea. Such a procedure seems to me more likely to promote the dangerous progress of the false membrane, to use a phraseology somewhat antiquated. To prevent misconception, let me add that no one can object to the removal of sloughy matters flapping loosely in the pharynx.

A recent writer has said that the more copiously lymph exudes upon the fauces and larynx, the less likely is it to be deposited along the interior of the bronchial tubes in croup and diphtheria; and the inference from that is that in such instances tracheotomy is more likely to succeed. This assertion we may not all admit, and, at all events, it has not been established as a fact; but though it were, caustics are not used for the purpose of promoting the deposition of lymph, neither will their free application render the success of tracheotomy more probable.

In the belief, then, that caustics in all forms are injurious in diphtheria, I would venture to recommend their complete abandonment in the treatment of this peculiar but perilous disease.

However improbable it may be that I shall be met with the

objection that my remarks are directed against a practice which does not now obtain, it may be right to state that any one who glances at the weekly and monthly medical journals of the day, will at once be satisfied that such is not the case. In the *Edinburgh Medical Journal* for October last, there is a lengthy article upon diphtheria, the writer of which advocates the use of caustics, even to the dropping of it into the larynx by a tube, and congratulates himself on thereby obtaining complete command of the symptoms. It is also worthy of remark that this practitioner uses iodide of potassium in ordinary doses, a mode of treatment previously proposed and employed by Mr. Wade, of Birmingham. The cases thus treated did not speedily arrive at convalescence—not so speedily as most recoverable cases of diphtheria usually do—and it may possibly yet occur to the writer that he may accelerate his cures by confining his medication to the latter remedy, and entirely excluding the caustics. The same writer mentions a family in which he was attending one diphtheritic patient, where there were five other inmates similarly affected in some degree; and when describing their symptoms and treatment, he says: "I had canterized and sponged, with the caustic solution, their throats daily, and I had ordered to be taken, for three or four days, ten drops of the tinc. mur. ferri twice daily. Nevertheless, the inflammation of the throat and the effusion of lymph kept slowly, but steadily advancing." In a subsequent page, when speaking generally of treatment, he remarks: "If the patient when I was called, was free from fever, but had his throat affected, I contented myself by touching the lymph with the caustic and sponging the throat, fauces, and glottis with the same solution, and gave the sol. iod. pot. from three times daily to every two hours, according to the urgency of the case. And again, "Where there was the slightest hoarseness, I never failed also at once to drop the caustic solution into the wind-pipe." Surely a striking example of the *nimia diligentia medicinae*, and the steady advance of the inflammation and effusion would surprise no one but the writer.

A careful attention to the current medical literature of the day, will convince almost any one that in some cases recovery is not to be ascribed to the local means employed, but rather that it takes place in favorable cases in spite of these means, which can only have the effect of protracting the period of disease, or delaying convalescence. It is perfectly well known to me, that in holding such opinions I do not stand alone, though I fear they are held and acted upon by but a few, not by a minority.

While writing this paper my attention was directed, as previously noted, to a pamphlet entitled "Notes on Clinical Medicine," by Dr. W. F. Wade, of Birmingham, the first part of which relates to diphtheria; and after stating that "local treatment exerts no known influence upon the general course of specific fevers," he continues in a succeeding page as follows:

"It is contrary to the ordinary rules of our art to interfere with the local development of blood poisons, except for special reasons."

"The faucial exudation of diphtheria is to be considered as the local manifestation of a general disease."

"Interference with it will not prevent its reproduction, nor will it prevent laryngeal complication, nor will it prevent the supervention of grave constitutional disorder. It is, besides, exceedingly irksome to young patients."

"We are justified in interfering with the throat exudation when there is excessive fœtor, or when it is so copious as to interfere with respiration or deglutition—not otherwise."

These opinions coincide so exactly with my own in respect to local management, that I have taken the liberty of quoting them; and it may be added, by the way, that Dr. Wade recommends, for constitutional treatment, iodide of potassium, iodide of iron, and bichloride of mercury, with bark, as eliminants of the blood-poison.

Lastly, in reference to syphilis, less requires to be said; for, while it cannot be doubted that caustics are still too frequently applied, and productive of considerable mischief, yet it must also be remembered that their frequent and indiscriminate employment is not sanctioned by the best authorities on the treatment of this disease.—*Glasgow Medical Journal*, Jan., 1864, p. 409. *Braithwaite's Retrospect*.

ON THE HYPODERMIC TREATMENT OF UTERINE PAIN.

By J. HENRY BENNET, M. D.,

Late Physician-Accoucheur to the Royal Free Hospital.

During the present winter I have used, with prompt and marked success, the hypodermic injection in several cases of severe dysmenorrhœa, with or without hysterical complica-

tions, and in several others of uterine, and ovarian neuralgia, and of facial neuralgia having an uterine origin. The relief has been obtained in from fifteen to thirty minutes, without being attended or followed by the headache, loss of appetite, or nausea, which are so frequently the result of the use of opiates in any other way, even by injection into the rectum. This latter mode of administering opiates has hitherto been my sheet-anchor in the treatment of uterine spasms and pain, and is certainly most efficacious; but it is not unfrequently attended by all the above-mentioned drawbacks, from which the hypodermic injection appears to be singularly free. In nearly all the instances in which I have tried this mode of introducing opiates into the system, the sedative result alone has been produced: there has been no subsequent bad effect whatever.

In one case of severe uterine tormina and pain, the result of arrested menstruation from cold, I injected thirty minims of the solution of morphia. In half an hour the pains, which had been agonizing for the previous twenty-four hours, were calmed. A good night's rest followed; and the next morning the menses had resumed their course, and my patient was all but well. In another similar case, the uterine pain was accompanied by severe hysterical symptoms. The injection was followed by the same favorable result—ease, sleep, and rapid disappearance of all morbid symptoms.

Owing to the complete control over the element of pain which the hypodermic injection of opiates appears to give, I have been able to carry on the necessary treatment in an interesting case of uterine disease, which I should otherwise have been obliged to treat under chloroform, or at a great disadvantage. The patient, a young German lady of twenty-four, came to Mentone last autumn, by direction of her medical attendants, with the view of spending the winter in the South. She was considered to be suffering from neuralgia, facial and general, and from nervous irritability of the system in general. She had been traveling with her husband from place to place, from bath to bath, in the search for health, for more than two years. On being consulted, I recognized the existence of a host of uterine symptoms, and found that the neuralgic and nervous illness had manifested itself after a severe confinement, which had occurred about three years ago. The discovery of extensive inflammatory ulceration of the neck of the womb gave the key to the state of ill health. Singularly enough, none of her previous medical attendants

had suspected the uterine origin of the neuralgia. Such cases are always very difficult to treat—interference with the uterine lesion all but invariably rousing the neuralgia. I have repeatedly had cases of the kind that I could only examine and treat locally by giving chloroform to the full surgical extent on each occasion, and this I have had to do twenty or more times in the same patient.

With the patient in question the surgical treatment of the ulceration was borne tolerably well at first, but as the diseased surface became more healthy, and consequently more sensitive, endurance diminished. Every time the sore was touched, severe neuralgia followed, and the general health began to flag. In former days I should have suspended all treatment, and have sent the patient to the country for a couple of months, to allow the nervous system to calm down, and to let nature do her best. In this instance such a course was not desirable, my patient being very anxious to continue the necessary treatment so as to be locally cured before we separated in the spring. I thought, therefore, of the hypodermic treatment, and tried the injection of thirty minims of the solution of morphia immediately after each uterine dressing. This course was attended with complete success; no neuralgia ensued, and I have been able to continue uninterruptedly the treatment now all but brought to a successful issue. On one occasion I omitted the precaution, and was sent for at ten o'clock at night. I found the patient a prey to a most distressing attack of facial neuralgia, which had come on an hour before. She was positively convulsed and shrieking with agony. Chlorodyne, sulphuric ether, &c., had been taken with no relief. I injected the thirty minims of morphia solution, and in twenty minutes she was calm and free from pain. It was repeated next day, and the facial neuralgia has not returned. This lady will no doubt gradually recover her health and get rid of the neuralgia when the uterine disease is thoroughly cured.

In a case of pure neuralgia, attacking first one and then another part of the body, I have injected from twenty to thirty minims of the acetate of morphia solution forty-two days in succession without any unfavorable result. The neuralgia, which was very severe, was entirely subdued by it for about eighteen or twenty hours, when it re-appeared, gradually increasing in intensity until the injection again relieved it. At the end of that long period the pains gave way, the treatment having been either curative, or having allowed the

neuralgic attack to wear itself out. During the entire period of treatment, the patient, a very delicate lady, slept better than usual, ate as well (her appetite being usually bad, and the digestive powers weak), and was able to take part socially in all that was going on around her. No one, indeed, was aware, except her family, that she was suffering from so painful a malady. To my surprise, I was able to suspend the morphia suddenly, without any of the distress and discomfort which is habitually observed when opiates have been long used and are abruptly abandoned.

From what I have seen of the hypodermic system, I believe that its use is capable of great extension in the treatment of pain generally. I consider that the injection of a solution of morphia after any operation would deaden pain, and produce a general calm of the system both soothing and beneficial to the patient. I think also that this result might be obtained in most cases without the usual drawbacks of opiates taken internally.

Some years ago I recommended in the *Lancet* the injection of opium into the rectum, as a means of modifying and even arresting obstinate sea-sickness. Since then various additional cases have come under my notice illustrating its efficacy. The great difficulty to all medication in sea-sickness is the fact that the stomach absorbs fluids with difficulty. By injecting subcutaneously, this difficulty is got over. Moreover, a subcutaneous injection would be managed easier on shipboard than the rectal injection, to which most people have a very natural antipathy.

I have used all but exclusively a solution of acetate of morphia in distilled water. Nine grains dissolved in two ounces of water gives a strength about equivalent to that of laudanum. The liquor morphiae of the Pharmacopœia contains spirit, and I have found that it constantly occasions small patches of painful inflammation; without the spirit, on the contrary, it appears to be quite innocuous. A moderate sized steel needle or canula I find preferable to the small gold one. The steel canula is sharper, and passes easier through the skin. By pinching firmly the fold of skin that has to be pierced between the finger and thumb, its sensibility to the puncture is much diminished. It does not seem to matter much, as regards results, in which region of the body the injection takes place. I have principally chosen the præcordial region for uterine and general pain, and for local neuralgia a spot as near to the region affected as possible.—*London Lancet*.

UTILITY OF ALOES IN THE TREATMENT OF WOUNDS.

Formula of an Aloetic Tincture for External Use.

Aloes is one of the oldest medicines; it enters into a great number of formulas, some of which have been famous for a long time (Elixir de longue vie, Paracelsus Elixir), and others some of which still continue to have a certain amount of credit (Garus's elixir, antecibum pills, etc.). Their number can be conceived on looking over the long list Jourdan gives of them in his *Universal Pharmacopœia*, where, however, the whole of the aloetic formulas are not given. It is, therefore, one of those medicines whose properties are known and appreciated, and about which it would seem there is little to be said. It is scarcely used now-a-days but internally, while it was previously used as much externally as internally. It is not, therefore, useless to recall to the memory of practitioners the uses of this medicine in external therapeutics which have been too much forgotten.

Galen believed aloes applied externally to be an astringent, and stated its properties for closing ulcers. After the Greeks, the Arabs, and a good many therapeuticians who came after them, till the eighteenth century. Geoffrey pointed out aloes as eminently useful in the dressing of wounds and ulcers, and as being susceptible of favoring and quickening their cicatrization, and even of stopping the hemorrhage occasioned by these solutions of continuity. Surgeons in old times used it frequently, either in an alcoholic solution for washing bad ulcers, or as a topic, and mixed with balsamic substances, such as myrrh and incense, in ointments, in balsams, which were used not only in old wounds, but even in recent ones. It entered into the composition of numerous vulneraries, and was thought to prevent suppuration as well as the formation of ulcers, and to promote the adhesion of edges of wounds made by cutting instruments. In these cases the balsam of the Commandeur de Permes, in the composition of which aloes enters, had a great renown. The cut edges were brought together, and over the wound a compress steeped in this compound balsamic tincture was applied. Aloes was also used in

composition of collyria for injuries connected with chronic ophthalmia, as well as in injections intended to modify fistulous openings and to promote their obturation.

All these facts seem to be forgotten now. Scarcely a few authors on materia medica mention them, and, if I am not mistaken, there are very few practitioners who now think of the external use of aloes and of the advantages it may present. It is left to veterinary surgery, which had the good sense not to give it up, and which continues to use it with the greatest advantage as vulnerary in the treatment of recent wounds, as well as for modifying and cicatrizing in the dressing of atonic, sanious, foetid and resisting ulcers.

It is much less, I confess, after reading the old authors than after having been struck with the rapidity with which the aloetic topics cicatrize wounds in animals, that I thought of experimenting on man, I was not long in discovering that with him they were equally useful. The direction of my studies and the nature of my occupations bring within my reach only a few cases of surgery. I have, however, for a few years got a sufficient number of cases to verify the remarkable cicatrizing properties of aloes. In using the compound medicines in the composition of which it enters, I could not have perfectly appreciated its action. These preparations, more or less complicated, contain balsamic substances, such as myrrh, incense, benzoin, balsams of Tolu or of Peru, which also possess very topic properties that necessarily to a certain extent assist the aloes. I preferred, therefore, using aloes alone, and found it so effectives that in the majority of cases it was not necessary for me to add an adjuvant.

The preparation which I chose for external use is a saturated tincture of aloes. The aloetic tinctures were, however, the most valued preparations of the old surgeons. I had, therefore, to support my first trials by the authority of the past; but the formula of these tinctures was very variable, and most of them added at least one other element, balsamical or gomme-resinous. My general formula only contains two elements, alcohol at an ordinary degree of concentration and aloes.

I first of all used one part of aloes to four of alcohol; but I was not long finding out that the more aloes the tincture contained, the more efficaciously it acted on the wounds. I had then to find out in what proportion the alcohol could be saturated with aloes, and I have obtained, with one part of aloes and two of alcohol, a complete solution. On making the dose

one part and a half, a deposit is formed which renders useless part of the aloes.

My formula is, therefore, the following : Aloes, 1 part; alcohol, 2 parts. The aloes must be chosen of good quality; Socotrine aloes is the best for external use as well as for internal; hepatic aloes is still valued in veterinary practice really more for its cheapness than for its special properties. As to the impure aloes, called caballin, it must be altogether rejected.

In order to apply the alcoholic tincture of aloes, dip into it a pencil made of lint, and then pass it over the surface of the wounds; or saturate with it the lint used for dressing the wounds. It is evident that this last mode of treatment is more active than the first; therefore it is the one which must be used in the treatment of atonic wounds which show little or no tendency to cicatrize. The application of the tincture of aloes on the wounds is but slightly painful, and even often, as to the sensation there is no local effect.

In the cases in which this treatment has succeeded with me I will mention particularly bed-sores occurring in patients suffering from typhoid diseases or cachectic, and generally so difficult to heal. I get them exclusively dressed with the tincture of aloes, or I have them painted on their surface or around them with this tincture, I then cover them with styrao ointment spread on lint. Bed-sores very seldom resist either one or the other of these treatments. I have also obtained remarkable success in the treatment of old, atonic, and inveterated ulcers; amongst others I will mention two cases of varicose ulcers of the legs, of several years' standing, and which had not been modified by several other applications; having been dressed with perseverance for about two months with lint saturated with tincture of aloes, these ulcers have ended by cicatrizing in an effective manner.

I believe that this topic would be of great advantage in the treatment of the ulcers which follow burns, and which often turn out so badly. In a thousand ways, I may say, surgical therapeutics would rejoice in the use of aloetic topics, and they would deserve to be rescued from their disuse. The formula of tincture which I have just now recommended would be, I think, the best that could be used; a balsamic ingredient such as benzoin or incense could be added in case of its insufficiency.

It will not be without interest to add that we can daily profit by the cicatrizing properties of aloes in the treatment of

our domestic animals, in the horse, whose services the doctor so often requires. We all know how much this animal is exposed to sores resulting from blows or knocks which he gets in his stable, or from the rubbing of his collar, his saddle, or other parts of his harness. Now, dressings of the saturated tincture of aloes dry up and heal, with great rapidity, the scratches and sores of horses, and prevent them becoming ulcerated. This lesson in veterinary surgery should not be despised by city practitioners, and less still by those of the country, who take an interest in the useful and courageous animal companion of their peregrinations.—*Dublin Medical Press*, March 16, 1864, from *Bull. de Thèrap.*

PUERPERAL CONVULSIONS SUCCESSFULLY TREATED
BY SUBCUTANEOUS INJECTIONS OF MORPHIA.

By PROF. SCANZONI, of Wurtzburg.

Since the attention of the medical profession was first directed by Dr. Wood, of Edinburgh, and more lately by Hunter and Behier, to the advantageous effects of subcutaneous injection, especially of narcotics, Professor Scanzoni has employed this method with success in numerous cases of neuralgia, hyperæsthesia, etc.; but he attaches especial importance to the following case of puerperal convulsions, because it seems to prove, in accordance with the views laid down by Hunter, that the subcutaneous application of narcotic agents furnishes a means of acting on abnormal irritations of the brain with greater rapidity and certainty than the administration of the same remedies by the mouth. It will, doubtless, be admitted that opium, in its different preparations, deserve the first place in the treatment of puerperal eclampsia. In his own experience, the observation of a large number of cases has convinced Professor Scanzoni that a kind of intoxication produced by opium leads with more certainty to a favorable termination than any other means recommended in this terrible disease. But, unfortunately, it is not always possible to administer a sufficient quantity of opium or morphia; sometimes the comatose condition of the patient, at other times the rapid succession of paroxysms, prevents administration by the mouth; and opiate enemata are occasionally rejected as soon as they are received. The subcutaneous injection, however, supplies the means by which these difficulties may be overcome, and a

sufficient quantity of opium introduced into the system to render its effects certain. Numerous experiments have convinced the author that, although the effect of this method is not always persistent (the neuralgiæ, for example, are not always cured by it), yet there are constantly produced—within a very short time, often a few minutes, after the injection—certain phenomena, which can leave no doubt as to the action of the opium upon the brain. Such symptoms are drowsiness, giddiness, headache, sickness, feeling of constriction in the throat, even vomiting, and depression; or, if the dose is large, somnolence. These facts, taken along with the known effects of the subcutaneous application in delirium tremens, mania, chorea, tetanus, etc., induced him to try the same treatment in puerperal convulsions, and with the most satisfactory results. After three injections of the meconate of morphia there occurred only two attacks in nine hours, while previously there had been three attacks in an hour and three quarters. This diminution of the convulsions after the injections is so much the more remarkable, since experience has shown that, as a general rule, the paroxysms become not only more violent, but follow at shorter intervals as the labor advances. And although the author does not imagine that he has discovered in the subcutaneous injection an infallible panacea for this dreadful malady, he is of opinion that the following case should induce physicians to give this means a trial:

Case—D., aged 21, primipara, strong and robust, was brought into the lying-in ward at a quarter to eight o'clock on the morning of June 8th, 1859. Labor had commenced in the night, and she had been seized with nervous paroxysms and loss of consciousness; no account was given of the nature of the attacks; the patient remembered nothing of what had occurred during the night. The whole body, and especially the lower extremities, were oedematous; on the right side of the tongue showed marks of being bitten by the teeth; the uterus corresponded to the pit of the stomach, and seemed sufficiently consistent; sounds of the foetal heart distinct. On examination, the os uteri was dilated to the size of a sixpence, the bag of waters was partly formed, and the head presented; the urine was very albuminous, and exhibited under the microscope numerous fibrinous cylinders. At eight o'clock she was seized with a second convulsive attack, which was of a very marked character, and lasted some minutes. On recovering consciousness, she could answer questions, although slowly. A third attack succeeded at a quarter to

nine, a fourth at a quarter to ten, a fifth at a quarter to twelve, and a sixth at five o'clock—the last the most violent. After the fourth paroxysm consciousness did not return, and the breathing became stertorous. At ten o'clock she was bled to about eight ounces, an enema with twenty-five drops of laudanum was given, the body was put into a warm bath, while cold irrigation was applied to the head. As opium could not be administered internally, a solution of the meconate of morphia was now, at three different times, injected under the skin, the quantity amounting in all to about ten grains (seventy-five centigrammes) of opium. The labor advanced very slowly. At three o'clock next morning the membranes burst; the os dilated to the size of a half crown; the head still high up above the brim; sounds of the heart very distinct. After this period the dilatation went on more quickly; at seven o'clock the os was larger than a crown piece, very extensive and dilatable, the head high up and immovable; complete loss of consciousness, profound coma. In these circumstances, which left little hope of saving the patient, and in spite of the high position of the head and the incomplete dilatation of the os uteri, it was decided to employ the forceps. Their application was by no means easy, but the extraction presented no difficulty. After a few tractions, a foetus was born, which breathed feebly at first, but soon began to moan vigorously; the placenta followed. During the operation there was no paroxysm. Some wine and ten drops of tincture of amber and musk were now given to the patient, which revived her a little, but did not restore consciousness. At eleven o'clock, a seventh attack came on, but was slight and short; after which she became excited and tried to escape, but towards morning she grew calm. At nine in the morning she could answer questions put with a loud voice. During the whole day she remained like a drunk person; pulse 128. The musk was stopped; nothing but lemonade given. Towards evening the abdomen was somewhat painful. During the night there were several slight attacks of mania; she constantly attempted to escape. In the morning she answered rationally; pulse 108. The oedema had diminished, the abdomen was still tender; there was difficulty of breathing; and numerous râles, fine and coarse, in the lungs. Warm bath, lemonade, expectorants, were prescribed. In the evening the patient was completely herself again; pulse 132. June 11th and 12th—She slept well during the night, the expectoration becoming easy, and the pain of the abdomen relieved by fomentations and poultices; pulse 120; the urine

contained little albumen, and no fibrinous cylinders. June 13th—Good condition; cedema gone; abdomen soft; some incontinence of urine during the night, was relieved by leaving in a catheter. All medicines were now suspended; the patient was put on good diet, and ordered to take every morning a glass of chalybeate mineral water. On the 17th there was no albumen found in the urine, and on the 21st the patient left the hospital with her child, being advised to continue the use of steel for a considerable time.

THE LA POMMERAIS CASE.

A homœopathic practitioner of Paris, named La Pommerais, has been lately condemned to death for the murder of his mistress, who he had previously induced to insure her life in different offices to the amount of one hundred and ten thousand dollars. The payment of life insurance, in this case, has given rise to very interesting medico-legal questions.

First, it may be asked whether the sum for which the life of the victim of the charlatan Pommerais was insured, will have to be paid over to her children, and, secondly, whether the transfers executed by her in favor of La Pommerais are valid, and his representatives will have any claim on the companies. The insurances, it is contended, will be available for the children of the murdered woman. It is established, and the companies have not, it is believed, disputed the fact, that they did not sign the contracts drawn up in her name and for her behalf without having taken all the preliminary steps usual in such cases, and obtained all the information respecting the insurer when they covenanted to pay a specified sum. The conditions of the contract between Madame de Pauw and the companies were fulfilled so far. She had been visited by the companies' medical officers, who reported that her health was excellent, and that the insurance might be safely effected; and the first premium was punctually paid. The policies of insurance specify only two cases where insurance companies may refuse payment—suicide or death in a duel; but when the party insured is murdered, his or her heirs must not suffer by the crime of a third party, nor are the companies released from their engagements. It was the woman's life that was insured, and not La Pommerais's; and in no case would the latter make anything by the transfer of her title to him, as it was shown to be obtained by fraud.

THE CALABAR BEAN.

PHYSOSTIGMA VENENOSUM.

The want of a remedy has long been felt which would more thoroughly act as an antagonistic to atropine and other mydriatics than opium or ergotine, in producing contraction of the pupil. This agent has been found in Calabar bean. The drug was first mentioned by Christison in 1855; but only its action when taken internally had been examined. Professor R. Fraser, also of Edinburgh, drew attention eight years afterwards to the myotic qualities of the remedy. And we copy the following from his remarks:

The plant from which the beans are obtained is a runner, growing wild in West Africa, and is gathered by the negroes, who employ it as an ordeal for criminals. The population of Calabar is estimated at one hundred thousand, and of these upwards of 120 are reckoned annually to be sacrificed by this poison.

These so called beans average rather more than an inch in length, and are irregularly reniform, having the appearance of a somewhat flattened fusiform body bent on one of its edges.

As obtained from Calabar, the beans have a grey color, and are encrusted with earthy matter; this is readily removed by washing, and a somewhat shining integument is exposed of various shades of brown, ranging from a light coffee to an almost perfect black.

While the other parts of the plant are indifferent, as it seems, to the animal organism, the beans have strongly poisonous qualities. According to the missionaries, those who have eaten them, first feel a violent thirst; afterwards, the poisoned individual cannot swallow; mucus flows from the mouth; convulsions; and also cramps in the back, come on, etc. During all this, the patient is conscious of everything, and even the language remains up to shortly before death, which may ensue within half an hour. Sometimes vomiting occurs, after which the heat diminishes; and, except headache, all other symptoms disappear.

Small doses (up to 12 grains) with which Christison made his experiments, soon caused an increasing pain in the epigastrium, with retching, a sentiment of dyspnoea, cramps in the muscles of the breast, vertigo and weakness in the limbs, great secretion of saliva, and irregular, slow motion of the heart, so that in one case the pulse made only 20 beats.

Applied locally to a rabbit, the alcoholic extract produced loss of contractility. And when the intestines were painted over with a solution, they ceased to move.

In order to examine the local action of the remedy on the eye, Robertson prepared an extract from the pulverized bean, which he dissolved in alcohol in three different concentrations. The weakest solution was produced by extracting 30 grains of the bean by alcohol, evaporating to desiccation and dissolving the rest in one drachm of water. Thus a dirty light red-brown fluid was obtained. By further extracting and evaporating, a four times and an eight times stronger extract were obtained. After R. had examined his eyes, and found that his pupils were 2 lines in diameter each, and with each eye Jager's No. 1 was read at 5 inches distance, he put a drop of the weakest solution in his left eye, which did not produce any more irritation than a drop of water. After 10 minutes, objects at a distance of one foot became indistinct; at the same time all objects seemed larger and nearer. There existed also a sensation of tension in the eye, as if very minute objects had been assiduously looked at. Both pupils were yet equal in size. After twenty minutes the left pupil had only a diameter of 1 line; objects further distant than 9 inches appeared dim; every thing looked at seemed larger and nearer. The right eye was normal. After 30 minutes the left pupil was only $\frac{2}{3}$, the right one $2\frac{1}{2}$ lines in diameter. The far-point of the left eye 8 inches. After 50 minutes the left pupil was $\frac{1}{2}$ and the right one 2 lines; a sensation of pressure and fatigue became manifest, when the subject of the experiment attempted to read; objects at 10 yards distance were recognized with difficulty. After 6 hours the left pupil was 1 line, the right one $1\frac{1}{2}$ lines; both reacted on light. After 12 hours the left pupil was $1\frac{1}{2}$, the right one $2\frac{1}{2}$ lines in diameter. The following morning both pupils showed yet a slight difference and the left eye was somewhat weak.

Bowman, who has also experimented on his own eye, as stated by Wells, says that after 5 minutes he felt a strong tension in the neighborhood of the ciliary body, as if something crept about there. After 10 minutes this sensation had yet increased, and he felt also some lancinating pain. After 15 minutes the near-point was at the left side $6\frac{1}{2}$ inches, while in the right eye, to which nothing had been applied, it was removed to a distance of 15 inches. The far-point seemed equally distant in both eyes. After 20 minutes No. XVII Jager was seen at 15 feet, but the letters oscillated; they dis-

appeared and returned alternately. The left pupil was then contracted to the size of the head of a pin, remained in this state for 18 hours, and in the course of three days again became normal. With this dilatation the reaction of the pupil on light again became noticeable on both eyes. Twenty-five minutes after the application there existed astigmatism: the vertical staffs of a window appeared perfectly distinct at a distance of from 6 to 10 feet, while the horizontal ones seemed dim and angular. This was remedied by a concave cylindrical glass of 14 inches focus. With a cylindrical glass of 50 inches focus distant objects appeared palpably smaller. This astigmatic state was yet found 18 hours after the application.

De Graefe has tested the new myotic on 9 healthy persons. The average time for the setting in of contraction was 14 minutes with the weak, 12 minutes with the strong solution; the duration of contraction with the former 2, with the latter 3 days; the maximum of contraction lasted from 6 to 18 hours. The altered state of refraction, *i. e.* the cramp of the muscle of accommodation and the approach of the near-point, lasted much less in Graefe's experiments: it reached its height in 10 minutes, and remained there but from 10 to 20 minutes. The apparent increase in the size of objects and change of illumination were also observed; the acuteness of vision was reduced from 1 to $\frac{1}{2}$. Ophthalmoscopically there appeared no change of circulation. In a patient who had no iris, but good vision, the action on the ciliary muscle was also manifest. Experiments on birds showed the action of the drug on the pupil of these animals to be very brief; on amphibia and fishes the remedy remained without influence. De Graefe also satisfied himself that atropine is a much more powerful irritant in an opposite sense than the Calabar bean. The latter is not capable of contracting the pupil after it has just been dilated by atropine; the action of the latter also again appeared, when in an atropinized eye the Calabar bean had for a short time produced a medium degree of contraction. When the pupil had first been contracted, atropine always acted, but somewhat slowly. The remedy acted also on the iris, when it was abnormal but not totally atropic, in glaucoma and in a case of fistula of the cornea.

From all hitherto published experiments, it results that the Calabar bean first produces a subjective sensation of tension in the ciliary body, which may be recognized also by the determination of the near-point and the range of accommodation: that it also causes contraction of the pupill: that the

contraction reaches its height in the course of an hour; that the iris loses during that period its contractibility; and that the dilatation to the normal size from this contracted state requires less time than the contraction of the pupil, when dilated by atropine (the latter circumstance probably depends on our incapacity up to the present time to extract entirely the active principles of the bean.) Simultaneously with the tension of the ciliary body occur the symptoms of myopia with a small range of accommodation, and of astigmatism. The remedy, therefore, acts by producing a cramp, by irritation of the ciliary branches of the oculo-motorius, in the ciliary muscle and sphincter of the pupil; it does not paralyze the dilatator pupillæ, as otherwise it could not produce complete contraction in a previously dilated pupil. It is, consequently, in so far an antagonist of atropine as the latter irritates the dilatator of the pupil.

Therapeutically the remedy will find the following applications: 1. Perhaps in retinitis, with great sensibility to light, in order to moderate the admission of light. 2. In mydriasis, consecutive in some cases to debilitating diseases (typhus, diphtheritis, etc.), and to injuries. 3. In ulcers at the margin of the cornea, in order to avoid incarceration of the sphincter of the pupil after perforation. 4. In artificial mydriasis, in order to do away with the dazzling, which is very disagreeable to the patients after having been examined by the ophthalmoscope, particularly if they have but one eye. [To these indications may be added the following: 5. In those corneal opacities with a transparent centre, which produce, when the pupil has its normal size, dazzling by diffusion of light. 6. In similar circumscribed opacities of the crystalline body, situated near the centre of the latter, and in dislocations thereof. 7. In abnormal mobility of the lens, with a tendency to fall into the anterior chamber. 8. For the discovery of simulated amaurosis, the pupil being dilated with atropine. 9. In wounds of the cornea and sclerotic with a recent prolapsus of the peripheral part of the iris. 10. Perhaps in diseases of the ciliary body.]

E. Hart recommends a solution of the extract of such a concentration that one drop shall contain the extractive matter of three grains of the crude drug. He furthermore says that the alcoholic extract is soluble in glycerine, and that this solution is more durable than the watery one, which after a few days becomes decomposed.—GEISSLER. *American Jour. Ophthalmology.*

ON THE
TREATMENT OF ALBUMINURIA IN CHILDREN.

[At a recent meeting of the Royal Medical and Chirurgical Society a paper was read on this subject by Dr. W. H. Dickinson, of which we copy an abstract and the discussion following it, from the *Medical Times and Gazette*.]

The granular kidney appears to be unknown in childhood. The only form of disease which produces albuminuria at this period of life is that which produces enlargement of the kidney and gives it a smooth mottled exterior. This is, in fact, a renal catarrh. The tubes become obstructed by an excess of their own epithelial growth, and hence arise all the evils of the disease. If only there is a free escape for the contents of the tubes the vascularity of the gland will be relieved by secretion, and the disorder will soon be at an end. The principle of treatment must be to send as much water as possible through the organ. This fluid is devoid of irritating properties, and probably passes through the gland rather by filtration than true secretion. With these views the patients were restricted to a fluid diet. They took from two to four pints of distilled water daily, and small doses of the infusion of digitalis. When the active symptoms had subsided iron was given. Twenty-six cases were adduced in which this treatment had been pursued. Twenty-two recovered completely; three were lost sight of while improving, but while still having a small quantity of albumen in the urine; one case did badly, and eventually died under other treatment. Many of the cases were of great severity. These results appear better than those afforded by other methods. Among the in-patients at the Children's Hospital otherwise treated, 11 died out of 39; and of 69 cases treated by Dr. Miller in Dispensary practice, 8 died. It was found that on an average the little patients were restored to apparent health in 30 days, while 15 days more were needed to get rid of the last traces of albumen. The use of the water did not seem in any case to increase the dropy, but the contrary. It was usual, however, when the swelling was great to let the digitalis set up a certain amount of diuresis before ordering the full quantity. The subsequent use of iron was believed to correct the effects of the disease, without influencing the disease itself. On the

occurrence of secondary disorders, such as convulsions, or acute inflammatory attacks, it was argued that the treatment of the renal mischief should be sedulously persisted in, with such additions as might be called for. The anæmic state of brain in uræmic convulsions, and their frequent occurrence after the exhaustion of diarrhœa or vomiting, were urged as reasons for abstaining from depressing remedies. A case was cited in which, under these circumstances, small doses of opium had been used successfully. A case was also given in which acute pleurisy had passed off under the use of only local measures. The paper professed to deal only with the albuminuria of childhood.

Dr. Fuller had had opportunities of witnessing the author's treatment, but chiefly in adults, in which it was not so successful as in children. In adults the renal affection was of longer standing. He had tried it in a child in private with success. It was successful in the dropsy of adults, but not so uniformly so as in dropsy in children after scarlet fever. If Dr. Dickinson's views were correct it was easy to understand that it should be more useful in children than in adults.

Dr. Basham said there were many points of practical value in the paper, and yet one or two things for comment. First, in cases where the renal affection followed scarlet fever let the treatment be what it might, the majority of patients did well. No doubt the diuretic influence of water was beneficial, but he thought the theory brought forward was open to a difference of opinion. He ventured to think that there was not merely a blocking up of the tube, but also some change of the gland-cells—they had become effete cells, and accordingly were thrown off, and these, of course, obstructed the tube. But we know that nature tries to get rid of them, and no doubt diluents are of help in this way. He should, however, think the natural tendency of such cases to do well had more to do with recovery than the treatment.

Dr. Hillier had tried Dr. Dickinson's plan, and had found it scarcely so satisfactory. He (Dr. Hillier) agreed with Dr. Basham, that such patients, however treated, if seen early, would nearly always do well. His plan of treatment was to keep them in bed, to use hot-air baths, to give purgatives and good diet. Occasionally he had under care a severe case, and then had tried the water plan, but had been obliged to resort to other means. Perhaps, however, he had been too timid. In one case purpuric symptoms came on. There was considerable hæmaturia and epistaxis. With the water treatment the

patient did worse, but when it was given up and gallic acid administered, the patient recovered.

The Author, in reply, said that he was quite aware that the majority would get well if left alone, but a great number would not. He had been able to collect a large number of cases of deaths in the post-mortem books of St. George's Hospital. In reference to Dr. Basham's remarks, he said the first changes were, he believed, in the quantity and not in the quality of the epithelium. In reference to Dr. Hillier's want of success, he would fall back on the explanation which the Dr. himself had suggested, viz., that the treatment was not persevered in. The only fatal case in the paper was the one in which the vapor bath had been used.

Mr. Bainbridge asked if the treatment would have been equally successful without the digitalis? He had seen many such cases during the last month, and the patients generally were thirsty, and, as a consequence, without any special direction, drank a great deal of water.

The Author said that the water treatment had been tried alone in three cases.

Dr. Stewart related a case of dropsy following scarlet fever occurring in a woman who had recently been confined. Suddenly convulsions came on, followed by unconsciousness. Cupping the loins, and other measures were followed by success, and he thought it a case in which the use of diluents would not have led to an equally favorable result.

Dr. Basham said that he thought that if any pathologist well versed in the use of the microscope would examine the gland-cells of the kidney of a child who had died by accident, and then those of one who had died from renal disorder, he would find a well-marked difference. In the latter the cell was cloudy, and the nucleus obscure. It had become an effete and imperfect cell.

Dr. Fenwick said that he had examined the mucous membrane of the stomach in scarlet fever patients, and had found changes in the epithelium there as well as in that of the kidney.

In reply, Dr. Dickinson said that no doubt there was a change in the cells, but not primarily.—*Boston Med. and Surg. Journal.*

ON SPURIOUS DIPHTHERIA; ITS NATURE AND TREATMENT.

Much confusion is often caused, and many hindrances to the advancement of medicine are thrown in the way, by a loose and indiscriminate application of names; it ought, therefore, to be the aim of every one who has the interests of his profession truly at heart, to attain to the clear and distinct ideas as to the nature of disease, so that he may at all times think, and judge, and act, with precision. And one way in which he may assist in clearing up matters is, by studying diseases which are allied to each other, and by carefully observing and pointing out the distinguishing characteristics of each.

My object at present is to direct the attention of the profession to an affection which, in many respects, resembles diphtheria, and may be mistaken for it, but which, it will be found, differs essentially from that disease, both in its nature and its results.

During the prevalence of an epidemic, it is usually noticed that there is a strong tendency to a particular form of disease. When cholera prevails, for example, there are always many cases of severe diarrhoea and vomiting, which get well, and the true characteristics of the epidemic affection never become fully developed; in these there is a tendency to cholera, but it would be a misapplication of terms to call them real cholera-cases, and so it is, I believe, in epidemics of diphtheria. Throat-affections have a tendency to take on this form of disease, and many, many cases which are called diphtheria, and are even treated as diphtheria, are, I am convinced, merely examples of the affection I am about to describe.

How otherwise can we account for the apparent success of one practitioner in his treatment, and the total failure of another?

We hear of one man curing his diphtheria cases with one remedy, while another is equally successful with something totally different; but only let the boasted remedies be applied to a really serious case of true diphtheria, the diphtheria which Bretonneau studied so thoroughly, and has so graphically described, and I am convinced they will turn out to be utterly impotent and useless.

It is of importance then to distinguish between the two affections, and I shall now endeavor to sketch the characteristics of spurious diphtheria.

In the course of a recent outbreak of diphtheria, my attention was drawn to a certain class of cases which, while they presented some of the symptoms of that affection, never assumed such a serious nature, or called for such a vigorous plan of treatment, as did those which had previously come under my case.

In the class of cases to which I allude, the patient usually complains first of a curious feeling in the throat, as if a pin were pricking it; there is languor, with pains in the back and legs; and sometimes considerable tenderness on pressure on the outside of the throat, just under the angle of the jaw.

On looking at the throat, the tonsils and uvula are more or less tumefied, according to the severity or mildness of the case, and of angry red color, while on their surface small, irregularly shaped, yellowish white spots will be observed.

The spots are evidently of an aphthous nature; there may be only one or two on the tonsil or on the uvula, or they may be so numerous as to give to the soft palate an appearance as if some one had shaken a box of white pepper over it.

However great their number may be, I have observed that their edges do not coalesce, each spot is isolated. They never look excavated, but seem as if they just floated on the mucus which moistens the throat.

The appearance of the tongue usually indicates derangement of the digestive system, and the pulse is smaller and more frequent than in health.

The treatment of spurious diphtheria is exceedingly simple—a mild aperient, the tincture of the muriate of iron, in doses of ten or fifteen drops thrice a day, with a simple gargle of chlorine water, will certainly and speedily cure the throat affection. There may be a good deal of prostration and muscular debility after an attack of this disease, but a liberal diet and the use of stimulants, if necessary, will soon restore the patient to health.

Aphorisms.—Spurious diphtheria, so far as my observation has extended, never proves fatal. Though accompanied with debility, I have never seen it followed by paralysis or albuminuria; the tonsils sometimes suppurate after an attack. A patient who has suffered from this affection may subsequently be attacked with true diphtheria.

In true diphtheria gargles are of very little use till the patient begins to recover, but in the disease under consideration their use is always followed by the greatest benefit from the very first. In spurious diphtheria the use of caustic is not required. I do not know how to account for it, but this affection seems to be most prevalent amongst young females.—*Pacific Med. and Surg. Journal.*

WEIGHT OF THE LUNGS.

By H. ALLEN, M.D., Asst. Surg. U. S. A.

In a series of post-mortem examinations, 200 in number, made at the Lincoln General Hospital, Washington, D. C., during the past eighteen months, the weight of the various organs was carefully noted. It has since been suggested that the conclusions drawn from the weighing of the lungs in these cases be recorded, since anatomists have paid but little or no attention to the subject.

Out of the 200 pairs of lungs 68 were found healthy. The smallest weight of any of this number was observed in a case of chronic diarrhoea; the right lung weighing but $8\frac{1}{2}$ oz., the left 9 oz. The largest weight was seen in a case of diphtheria the right weighing 20 oz., the left lung $18\frac{1}{2}$ oz. The average weight of the whole number was, for the right lung, $15\frac{1}{2}$ oz., for the left lung, $14\frac{1}{2}$ oz. In 7 out of the 41 cases of chronic diarrhoea, the lungs gave small weight. The aspect of the organ in these cases was peculiar. They were shrunken, and occupied but a small portion of the thoracic cavity; the distance between the anterior thoracic wall and the lung being in some specimens as great as $2\frac{1}{2}$ inches. The parenchyma was dry, with little bronchial secretion evident, and no appearance of the pinkish hue of the healthy lung was presented. Owing to the absence of blood and the presence of pigmentary matter, the tissue was everywhere of a greyish color. The remaining 132 specimens were diseased; the majority from pneumonia and pleurisy. A large number were congested and rendered heavy, the parenchyma being charged either with the sero-sanguineous fluid of commencing pneumonia, or the greyish œdema of imperfect convalescence from the same disease. It would be uninstrusive to give the weight

of the lungs in each case, since no two specimens were alike; they varied greatly in the degree of complication of the congestion or consolidation. The heaviest organ was observed in a case of nearly complete double pneumonia; in which the last stage of red hepatization was attained in both lungs, with the exception of the apex of first lobe, left side, which crepitated under pressure. The right lung weighed 50 oz., the left 52. The smallest weight of any diseased lung was noticed in a case of phthisis, in which the relative weight of right and left lungs was as $8\frac{1}{2}$ oz. to $7\frac{1}{2}$ oz. The first 75 of these weights were recorded under the auspices of Assistant Surgeon G. M. McGill, U.S.A., the remainder by myself. The examinations were all made shortly after death, and it is believed that no decomposition had taken place in any of the specimens.—*Am. Med. Times.*

Foreign Bodies in the Ear.—For the removal of foreign bodies we should first employ only the gentlest means, such as syringing the ear with warm water; and by this, substances of the most different form and composition—even lead pencil—may be removed. Beyond a bent forceps, an ear-scoop with a long handle, and a small corkscrew, almost all the instruments recommended for this purpose are more or less toys or dangerous. By means of the corkscrew, wadding and similar soft substances may be easily drawn out; and in many cases we can remove bodies by passing the ear-scoop behind them. We should never employ force, and never should pass any instrument a line further into the meatus than we can follow it with the eye. For want of such a precaution many a patient has lost his life or his hearing. The first effect of rough procedures is to make matters more obscure, the bleeding and swelling which ensue rendering complete inspection impossible. If the gentlest endeavors (or syringing), during which the eye guides the hand, do not succeed, the body should be left in the ear—aye, even were it a dagger's point; and strong as the expression seems, the author justifies it by reference to cases on record in which pointed bodies have remained for years in the ear with impunity. It is not meant to be said that bodies should in general be left in the ear, but that matters should not be made worse than they are by violent manipulations. Leaving the body in the ear, then, warm-water syringing and soft poultices are to be daily resorted to, until the ensuing suppuration loosens it and gives it a new direction.—*Dublin Med. Press*, Jan., 1864.

Antidotes for Strychnia.—Professor R. Bellini, after conducting a long series of experiments on poisoning by strychnia and its salts, arrives at the opinion, that the best antidotes are tannic acid or tannin, chlorine, and the tinctures of iodine and bromine. Chlorine, he maintains, attacks the strychnia, even when it is diffused through the system, for he found that in rabbits poisoned with the sulphate of the alkaloid, on being made to inhale chlorine gas in quantity, such as was not sufficient in itself to kill, the convulsions were retarded, and were milder when they occurred; death was also less rapid. The author further observed, that when strychnia was exhibited with pyrogallie acid, convulsion was retarded for the space of half an hour, by comparison, with other experiments in which the alkaloid was given by itself. Professor Bellini believes that this arrest in symptoms is not dependent on acid acting chemically on the strychnia, but only through the astringent effects produced by the acid on the mucous membrane of the stomach whereby the absorption of the poison is rendered difficult. The same author, dwelling on the frog-test for strychnia, asserts that this test is not to be trusted, inasmuch as other poisons produce the tetanic symptoms, although in a lesser degree.—*Brit. Med. Jour.*

—The Royal Society for the Prevention of Cruelty to Animals, offers through the London *Times* a prize of fifty pounds for the best essay on the vivisection of animals, under the following propositions: 1st. Is it necessary to give dexterity to the operator? 2d. Is it necessary or justifiable for the general purposes of science, and if so, under what limitations?

A Cause of Bronchitis.—It has been found, in France, that the use of threshing machines has produced an immense amount of bronchitis and disease of the throat among the laborers employed, who are exposed to an atmosphere charged with dust, which affects them so powerfully, that in some parishes there are whole families of confirmed invalids. An order has been issued that the laborers employed near these machines must work in veils.

The Tomb of Hippocrates.—According to an Athenese journal, this tomb has been recently discovered near the village of Arnaoulti, not far from Pharsalia. An inscription leaves no doubt as to the identity of the original inhabitant of this sepulchral structure. In the interior were found a gold ring in the form of a serpent, the antique symbol of the curing art, a small chain and band of the same metal. A bust in bronze was also discovered, which is presumed to be a likeness of Hippocrates. These objects, together with the inscribed stone, were given, by the Turkish inhabitants of the district to Hourni Pasha, Governor of Thessaly, who forwarded them to Constantinople.

An Association of American Ophthalmic Surgeons.—In accordance with arrangements previously made, a convention of gentlemen devoted to Ophthalmological science and practice was held at the New York Eye Infirmary, during the late meeting of the American Medical Association. Dr. Delafield of New York, presided, and delegates were present from various parts of the United States. It was voted to hold the first annual meeting in the city of New York on the second Tuesday of June, 1865.

Proportion of Births to Population.—The proportion of births to population in various European countries, is given in a blue-book of "Statistical Tables relating to Foreign Countries." In England and Wales the annual births are 1 in 28 persons; 1 in 30 in Belgium, Holland and Norway; 1 in 32 in Sweden; 1 in 33 in Hanover, the Hans Towns, and Denmark; 1 in 34 in Greece; 1 in 38 in France; 1 in 26 in Wurtemberg; 1 in 25 in Russia; 1 in 24 in Austria, Saxony and Prussia; and 1 in 23 in Poland.

Iodide of Potassium and Belladonna in Rheumatism.—Dr. White, of Summit Hill, Penn., states in the *Med. Repor.*

ter, that he has used the iodide of potassium and tinc. belladonna with good results in acute rheumatism. He gives a teaspoonful of the following mixture every four hours, iodide potass., 3 ij, tinct. belladonna, 3 ij, aqua cinnamon, 3 ives. This forms a very good alterative and anodyne, but the dose is too small.

Ligature of the Femoral Artery for the Cure of Elephantiasis of the Leg and Foot.—The N. C. *Med. Journal* says:—"Dr. J. L. Ozier reports (Charleston *Med. Journal*,) a case of elephantiasis of the leg and foot, of enormous size, which had existed for five years, in a negro man, 26 years of age, in which he applied a ligature to the femoral artery. At the time of the report, three months since the operation, it is stated that 'the leg and foot have subsided to very nearly their natural size.'"

Discoverer of Anæsthesia.—A pamphlet of fifteen pages is in circulation, setting forth the claims of Dr. Horace Wells, of Hartford, Conn., as the real discoverer of anæsthesia. The evidence, to say the least, is very much in his favor.

—Robert M. DeWitt, of New York, has in press, and will publish in a few weeks, a new work on "Morbid Tumors," by Rudolph Virchow, Professor of Pathological Anatomy, Berlin.

Obituary.—Died, at Pinkhill, near Edinburg, June 17th, 1864, aged 52, James Miller, M. D., for 22 years the able Professor of Surgery in the University of Edinburg, and author of a well known system of Surgery.

—The daughter of Priessnitz, the founder of cold water cure and a non-believer in vaccination, recently died in Kaschau of small-pox.

—From a comparison of the statistics of 21 nations in Europe and America, it appears that one blind person is found among 1267 persons. The limits are : in America, 1 in 2489 ; in Norway, 1 in 540.

—Messrs. Sangman & Co. announce the publication of an abridgement of Copland's Medical Dictionary, brought down to the present state of Medical Science by the author. And Comparative Anatomy and Physiology of Vertebrate Animals, by Prof. Owen. Mr. R. B. Carter has translated Zander's "Ophthalmoscopy : its varieties and uses," from the German.

—The most recent excavations of Pompeii have yielded, besides a bronze statuette of Silenus, another most important discovery. Hitherto, no well with water had ever been found in Pompeii ; during these excavations, however, a subterranean room was laid open, with a well 25 metres in depth, in which the most excellent drinking water was found.

The Negro in Disease.—In the department of the South there are a number of regiments of colored troops, and it is a well ascertained fact that they are more liable to disease, and that the mortality is greater than among the white regiments. They rarely ever recover from a severe wound, and when attacked by disease they seem to care but little for life, and die in spite of all remedies and attention. These facts are particularly true of the North Carolina and South Carolina colored soldiers, the sick reports of which are fifty per cent. larger than those of the white troops ; and I find, on referring to my notes, that there were, during the months of November and December, thirty-eight deaths from disease in thirteen regiments, three of which were colored. The latter lost seventeen men of the thirty-eight. The colored troops recruited in the Northern States do not suffer to the same degree.—*Dr. Goss, in American Medical Times.*

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